

R&D BY SPECIFIC BUDGET FUNCTION

NATIONAL DEFENSE

The total R&D budget authority request for national defense (function 050) in 1998 is \$38.7 billion, which would be a decrease of \$0.3 billion—or 1 percent—from estimated 1997 levels. This function consists of the DOD's research, development, test, and evaluation (RDT&E) programs and the atomic energy defense activities of DOE (table 6). The defense function accounts for 54 percent of the total Federal proposed R&D funding in 1998—16 percentage points less than the 1986 share (chart 4). Selected defense changes proposed for R&D funding in FY 1998 are highlighted below.

- R&D funds for all of DOD's mission areas are proposed to decrease by nearly 1 percent to \$36.4 billion and account for 93 percent of 1998 defense R&D budget authority. DOE's defense R&D programs are proposed to drop by 2 percent to \$2.4 billion.
- Proposed budget authority for defense basic research is \$1.2 billion, close to the FY 1996 level. However, defense accounts for a smaller share of the total basic research total in FY 1998 (7.8 percent of total) than it did in FY 1990 (8.5 percent of total).
- Of the three armed services, only the Air Force will receive an increase in RDT&E funding. The Air Force is slated to increase 4 percent, while the Navy and the Army will drop 3 percent and 8 percent, respectively. Hardest hit are the Navy's programs for operational systems development—down 19 percent or \$0.4 billion, the Army's programs for advanced technology development—down 38 percent or \$0.3 billion, and the Air Force's programs for management support—down 21 percent or \$0.2 billion (table 7).
- R&D programs within DOD's Defense Agencies are proposed to decrease by 2 percent to \$9 billion, which reverses the 1997 gain of more than 1 percent over 1996 levels. The Ballistic Missile Defense Organization (BMDO) and the Defense Advanced Research Projects Agency (DARPA)

will account for 53 percent of the R&D programs within the Defense Agencies. The budget request for the R&D portion of DARPA will increase 3 percent to \$2.2 billion. DARPA serves as the central R&D organization in DOD with a primary responsibility to maintain U.S. technological superiority over potential adversaries. BMDO will show a 23.5-percent drop in funds to \$2.6 billion. BMDO funds programs in national missile defenses and in theater missile defenses. The agency also is responsible for the continuing research and development of follow-on technologies that are relevant for long-term ballistic missile defense.

- Among DOE's atomic energy defense activities, the largest reduction is proposed for naval reactors development, whose R&D funding will decrease \$43 million to about \$580 million in FY 1998. Other reductions are planned for environmental restoration and waste management, down \$29 million to about \$170 million. Small increases are proposed for R&D related to nuclear safeguards and security—up 10 percent to \$23 million.

HEALTH

The administration proposes a 2-percent increase for R&D health programs (function 550). The proposed \$13 billion 1998 health total accounts for 39.5 percent of all Federal nondefense R&D. Although the total budget authority has been increasing, the health share has been fairly stable over the last 10 years, maintaining above a third of the total nondefense R&D (chart 5). The Department of Health and Human Services, (HHS) funds all R&D classified for health care services and health research (subfunctions 551 and 552); R&D funding for consumer and occupational health and safety (subfunction 554) is provided by HHS and the Department of Labor's Occupational Safety and Health Administration. R&D funding proposed in the FY 1998 budget for health provides growth for almost all agencies performing R&D health programs (table 8). Funding decreases are slated for the Health Resources and Services Administration (down 64 percent) due largely to decreases in funding for health professions, education, and training. The Food and Drug Administration is expected to be

Table 6. R&D budget authority for national defense (050), Fiscal years 1996-98

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Agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total.....	37,801	39,030	38,726	-0.8
Department of Defense--military (051).....	35,401	36,625	36,371	-0.7
Research, development, test, and evaluation (RDT&E).....	34,971	36,154	35,934	-0.6
Department of the Army.....	4,700	4,908	4,511	-8.1
Department of the Navy.....	8,442	7,825	7,611	-2.7
Department of the Air Force.....	12,426	13,873	14,451	4.2
Defense agencies.....	9,133	9,255	9,070	-2.0
Ballistic Missile Defense Org.	3,045	3,373	2,582	-23.5
Defense Advanced Res. Projects Agcy.	2,269	2,140	2,206	3.1
Other defense agencies.....	3,819	3,742	4,281	14.4
Developmental test & evaluation.....	247	269	268	-0.3
Operational test & evaluation.....	23	24	23	-2.8
Other military funding 2/.....	430	471	437	-7.2
Department of Energy--atomic energy defense activities (053).....	2,401	2,405	2,354	-2.1
Stockpile Stewardship 3/.....	1,300	1,363	1,362	-0.1
Naval reactors development.....	609	619	576	-7.0
Stockpile Management 3/.....	0	0	21	NA
Environmental restoration and waste management.....	268	198	169	-14.4
Special Technologies.....	4	4	4	0.0
Nonproliferation.....	198	201	200	-0.5
Nuclear safeguards and security.....	22	21	23	9.9

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

2/ Adjustment to R&D budget to exclude major construction and add appropriate personnel costs in direct support of conduct of R&D, and other appropriations.

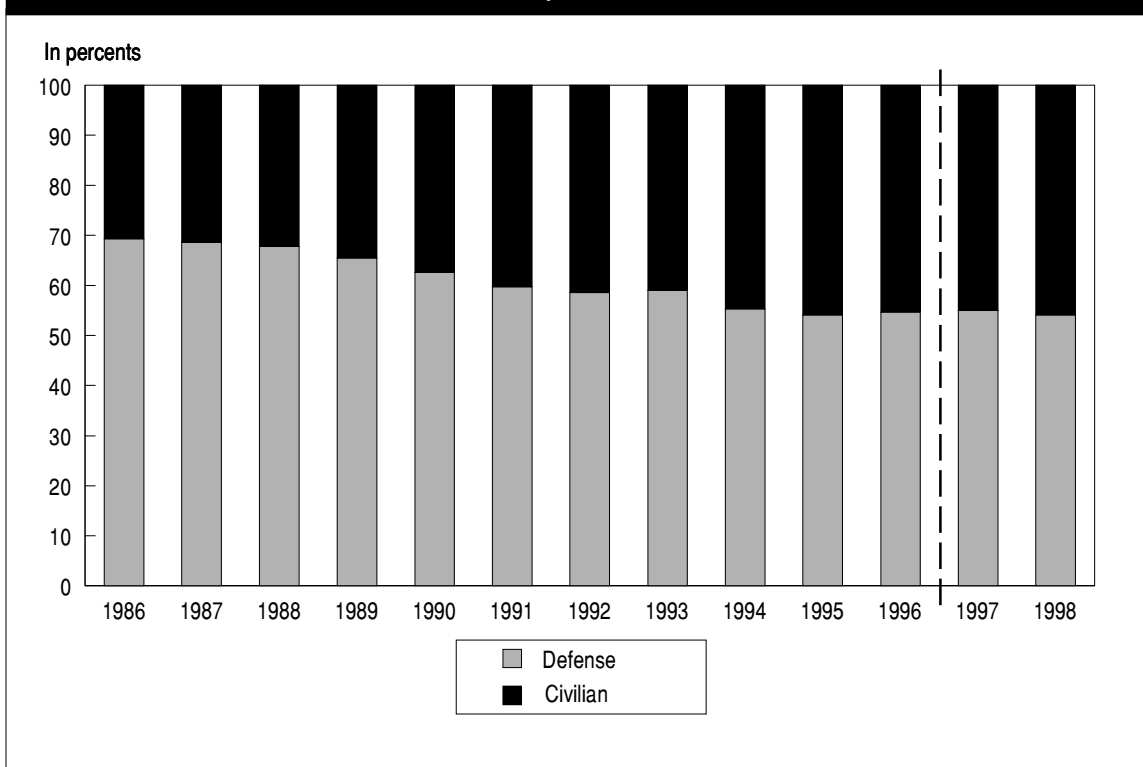
3/ FY 1998 figures reflect transfer of some nuclear materials R&D costs from Stockpile Stewardship to Stockpile Management.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Departments of Defense (DoD) and Energy (DOE) submissions to Office of Management and Budget MAX Schedule C; DoD's "RDT&E Programs (R-1);" *Budget of the United States Government*; and supplemental data obtained from the DOE budget office.

**Chart 4. Distribution of federally funded R&D by defense and civilian functions:
Fiscal years 1986-98¹**



¹1997 numbers are preliminary; 1998 numbers are proposed.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

Table 7. Total obligational authority (TOA) for Department of Defense (DOD) research, development, test, and evaluation (RDT&E) budget, Fiscal years 1996-98

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Funding category and agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total RDT&E (budget authority).....	34,971	36,154	35,934	-0.6
Total RDT&E (TOA).....	35,204	36,159	35,934	-0.6
Basic research.....	1,099	1,075	1,164	8.2
Department of the Army.....	182	179	199	11.4
Department of the Navy.....	372	351	382	8.8
Department of the Air Force.....	216	210	227	8.0
Defense agencies.....	330	336	356	6.0
Applied research	2,836	2,860	2,814	-1.6
Department of the Army.....	451	550	463	-15.8
Department of the Navy.....	538	533	490	-8.0
Department of the Air Force.....	627	652	593	-9.0
Defense agencies.....	1,220	1,126	1,268	12.6
Advanced technology development.....	3,609	3,725	3,414	-8.3
Department of the Army.....	580	676	418	-38.1
Department of the Navy.....	472	500	433	-13.3
Department of the Air Force.....	517	472	402	-14.7
Defense agencies.....	2,040	2,078	2,160	4.0
Demonstration and validation.....	5,197	5,603	5,567	-0.6
Department of the Army.....	454	557	523	-6.0
Department of the Navy.....	1,713	1,924	2,135	11.0
Department of the Air Force.....	546	826	1,149	39.2
Defense agencies.....	2,484	2,297	1,760	-23.4
Engineering and manufacturing development.....	8,645	8,807	8,549	-2.9
Department of the Army.....	1,125	1,133	1,107	-2.2
Department of the Navy.....	2,345	2,137	2,086	-2.4
Department of the Air Force.....	4,585	4,500	4,444	-1.2
Defense agencies.....	590	1,037	911	-12.1

See explanatory information and SOURCE at end of table.

Table 7. Total obligational authority (TOA) for Department of Defense (DOD) research, development, test, and evaluation (RDT&E) budget, Fiscal years 1996-98

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Funding category and agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Management support.....	3,654	3,144	3,085	-1.9
Department of the Army.....	1,235	1,069	1,137	6.3
Department of the Navy.....	685	537	595	10.9
Department of the Air Force.....	1,047	1,038	821	-20.9
Defense agencies.....	418	207	241	16.3
Developmental test & evaluation.....	247	269	268	-0.3
Operational test & evaluation.....	23	24	23	-2.8
Operational systems development.....	10,163	10,943	11,341	3.6
Department of the Army.....	731	746	663	-11.0
Department of the Navy.....	2,348	1,847	1,489	-19.4
Department of the Air Force.....	4,974	6,175	6,814	10.4
Defense agencies.....	2,110	2,176	2,375	9.1
Adjustment for RDT&E budget authority 2/.....	-233	-5	0	NA

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

2/ Detailed budget information on DOD's RDT&E activities is available only in total obligational authority (TOA), which is the sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget authority from previous years and other authorized credits from TOA.

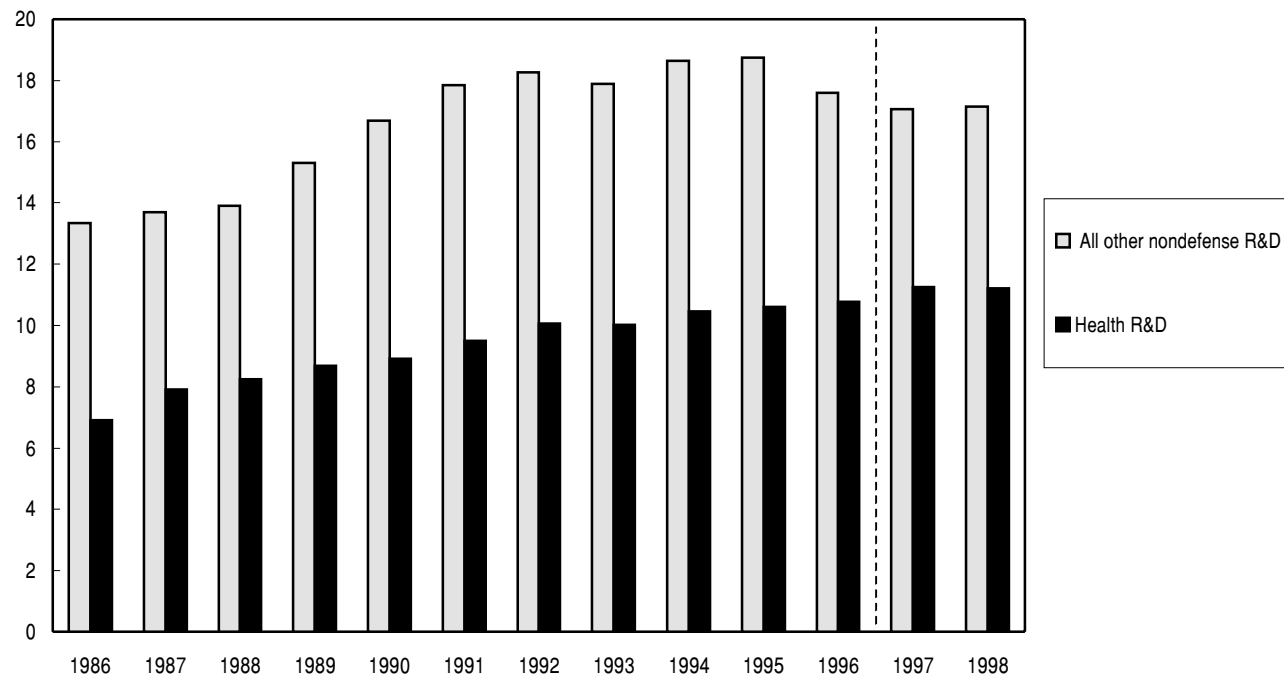
NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Data from DoD, "RDT&E Programs (R-1)." Total RDT&E budget authority data from *Budget of the United States Government FY 1998*, Appendix pp. 345-351.

Chart 5. Federal budget authority for health R&D compared with all other nondefense R&D budget authority: Fiscal years 1986-98¹

Billions of constant 1992 dollars



¹1997 numbers are preliminary; 1998 numbers are proposed.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

Table 8. R&D budget authority for health (550), Fiscal years 1996-98

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Agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total.....	11,867	12,693	12,998	2.4
Health care services and health research and training (551, 552).....	11,695	12,517	12,839	2.6
Department of Health and Human Services (DHHS):				
National Institutes of Health.....	11,255	11,983	12,335	2.9
Centers for Disease Control.....	297	346	358	3.5
Agency for Health Care Policy and Research.....	65	96	87	-9.4
Health Care Financing Administration.....	55	44	45	2.3
Health Resources and Services Administration.....	14	14	5	-64.3
Departmental Management	9	34	9	-73.5
Consumer and occupational health and safety (554).....	172	176	159	-9.7
Food and Drug Administration (DHHS).....	165	173	156	-9.8
Occupational Safety and Health Administration (Dept. of Labor).....	7	3	3	0.0

1/ Adjusted to reflect supplementals enacted in Public Law 105-18.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

funded 10 percent below its FY 1997 level, and the Occupational Safety and Health Administration is expected to be funded at FY 1997 levels. Selected health R&D funding changes are highlighted below.

- The health function accounts for 46 percent of all Federal basic research support. The \$7 billion proposed for health-related basic research is 3 percent more than the 1997 level.
- A 3-percent increase—\$350 million—is proposed for R&D support to be provided by NIH (table 9). Totalling \$12.3 billion, these programs would

account for 95 percent of all health R&D funding. The primary mission of NIH is to advance national capabilities for prevention, diagnosis, and treatment of disease through biomedical and behavioral research. NIH is the principal biomedical research agency of the Federal Government.

- Within NIH, the largest amount of R&D funding is proposed for the National Cancer Institute (\$2.0 billion), followed by the Office of AIDS Research, OAR, \$1.5 billion. Proposed funding increases for each of these units are nearly 3 percent more than FY 1997 levels. OAR provides pass-through

Table 9. R&D budget authority for the National Institutes of Health (NIH), Fiscal years 1996-98

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Agency	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total.....	11,255	11,983	12,335	2.9
National Cancer Institute.....	1,984	2,108	2,169	2.9
National Heart, Lung, and Blood Institute.....	1,243	1,319	1,351	2.5
National Institute of Allergy and Infectious Diseases.....	553	589	614	4.2
National Institute of General Medical Sciences.....	816	863	883	2.2
National Institute of Diabetes and Digestive and Kidney Diseases.....	727	772	790	2.3
National Institute of Neurological Disorders and Stroke.....	644	684	703	2.8
National Institute of Mental Health.....	537	572	597	4.4
National Institute of Child Health and Human Development.....	513	547	561	2.7
National Institute on Drug Abuse.....	296	318	348	9.2
National Institute on Aging.....	438	470	481	2.4
National Center for Research Resources.....	298	318	327	2.8
National Eye Institute.....	296	315	322	2.4
National Institute of Environmental Health Sciences.....	270	290	301	3.9
National Institute of Arthritis and Musculoskeletal and Skin Diseases.....	232	244	250	2.5
National Institute on Alcohol Abuse and Alcoholism.....	183	195	202	3.7
National Institute of Dental Research.....	163	174	181	4.0
National Institute on Deafness and Other Communication Disorders.....	168	180	185	3.2
National Human Genome Research Institute 1/.....	165	184	199	8.5
National Library of Medicine.....	64	67	70	4.9
National Institute of Nursing Research.....	46	49	51	2.8
John E. Fogarty International Center.....	16	16	17	3.1
Office of AIDS Research 2/.....	1,386	1,474	1,512	2.6
Office of the Director.....	219	236	220	-6.8
Women's Health Initiative.....	56	57	55	-3.7
Minority Health Initiative.....	62	63	63	1.0
Other research expenses.....	100	116	102	-12.5

1/ The National Human Genome Research Institute became an institute on January 14, 1997.

2/ The Office of AIDS Research (OAR) was created in FY 1995 to consolidate NIH-wide AIDS research. OAR funds AIDS research in other institutes. AIDS research funded in individual institutes for FYs 1996 and 1997 has been consolidated in the OAR account for comparison purposes.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data. Excludes non-R&D and R&D facilities components of institute budgets.

SOURCE: Departmental submission to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the NIH budget office.

funding to the other NIH Institutes for AIDS research. OAR dollars for FYs 1996 and 1997 have been adjusted in this report for comparability by collecting AIDS funds under the OAR line item. National Heart, Lung, and Blood Institute is the third largest funded Institute, slated for \$1.4 billion (2.5 percent more than 1997 levels).

- With few exceptions, each of the 19 Institutes and Centers comprising NIH will increase between 2 and 9 percent over FY 1997 funding levels. With support from the Administration, the National Center for Human Genome Research became an institute in January 1997 and renamed the National Human Genome Research Institute. NIH expects to increase the new institute's funding by 8.5 percent, up \$15 million over the FY 1997 level. R&D for the NIH Director's Office is proposed to decrease by 7 percent to \$220 million. Within the Director's Office, Women's Health Initiative will receive a 4-percent decrease in R&D funding, while funding for the Minority Health Initiative will increase only 1 percent over the FY 1997 levels.
- Consumer and occupational health and safety (subfunction 554) is slated to be funded at 10 percent below the FY1997 level. The Food and Drug Administration (FDA) accounts for 98 percent of these funds. FDA activities are directed toward protecting the health of the Nation against impure and unsafe food, drugs and cosmetics, and other potential hazards.

SPACE RESEARCH AND TECHNOLOGY

NASA funds all R&D that is specifically budgeted in space flight, research, and supporting activities (subfunction 252). NASA conducts research for the solution of problems of flight within and outside the Earth's atmosphere and develops, constructs, tests, and operates aeronautical and space vehicles. R&D budget authority is proposed to increase by nearly 3 percent in 1998 to \$8 billion and account for 11 percent of total Federal R&D funds. As recently as 1986, space accounted for a 5-percent share of the R&D total. The space share has been steadily increasing over the last ten years. Selected space research and

technology R&D funding changes are highlighted below:

- Four of NASA's science programs—Space Station, Space Science, MPTE, and Space Transportation Technology—will comprise 88 percent or \$7 billion of the total space R&D budget authority in FY 1998 (table 10).
- NASA's biggest funded activity, the Space Station program (which includes Russia as a partner) is slated for an 8-percent increase in R&D to \$2.4 billion in FY 1998, and would account for 30 percent of total space R&D budget authority. The Space Station is planned to be a permanent outpost in space where humans would live and work productively for extended periods of time. The intent is to provide an advanced research laboratory to explore space and employ its resources, as well as the opportunity to learn to build, operate, and maintain systems in space.
- Space science, having the second largest budget (\$2.3 billion, which is 3 percent more than the FY 1997 funding level) of the four categories, is the portion of the NASA budget devoted to expanding knowledge of the Earth, the solar system, and the universe beyond. The budget request includes funds to continue development of the Advanced X-Ray Astrophysics Facility, which is scheduled for launch in 1998. The Cassini program is also funded under space science. The Cassini mission will explore the gaseous outer planets such as Saturn and Jupiter and is scheduled for launch in the Fall of 1997. Other programs include the Mars Surveyor, New Millennium Spacecraft, and Discovery.
- MTPE will receive a 4-percent (\$62 million) increase in funding to \$1.6 billion in FY 1998. MTPE programs include the earth observing system satellites and information system, the Landsat satellite, and various scientific research and data analysis activities. This activity includes the study of global climate change and integrated functioning of the Earth as a system.

**Table 10. R&D budget authority for space research and technology (252),
Fiscal years 1996-98**

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Funding Category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total.....	7,844	7,795	8,004	2.7
National Aeronautics and Space Administration (NASA):				
Space Station 1/.....	2,083	2,248	2,431	8.1
Other human space flight.....	69	87	112	29.1
Space science.....	2,420	2,227	2,302	3.4
Life and microgravity sciences 1/.....	681	482	330	-31.6
Mission to Planet Earth.....	1,459	1,529	1,591	4.0
Space transportation technology.....	533	644	695	8.0
Academic programs.....	124	139	115	-17.2
Safety, reliability & quality assurance 2/.....	0	0	5	NA
Mission communication services	476	439	423	-3.6

1/ Space Station related research in Life and microgravity sciences is transferred to the Space Station account in FY 1998.

2/ Funded in Space transportation technology in FYs 1996 and 1997.

NOTES: Includes funds for research and research program management, but excludes fixed capital equipment costs. Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; budget justification documents; and supplemental data obtained from the NASA budget and the NASA budget office.

- The Space Transportation Technology program is slated to get an 8-percent (\$51 million) increase in funding to \$0.7 billion. This initiative provides for planning and assessing technology development requirements.

GENERAL SCIENCE

Research activities in general science (subfunction 251), of which 94 percent are basic research, are funded by NSF and DOE. Total research support in general science is proposed to increase by 4 percent in 1998 to \$3 billion. Of this research total, 76 percent are slated for NSF and 24 percent are for DOE. Selected general science changes proposed for R&D funding in FY 1998 are highlighted below.

- NSF is to receive \$2.3 billion in research budget authority, an increase of \$90 million, or 4 percent, more than the 1997 funding level. Funding increases are proposed for all seven of NSF's research directorates (table 11).
- Funds for mathematics and physical sciences (MPS) will increase by 3 percent (a \$19-million increase over 1997) and will account for 30 percent—\$693 million—of the proposed NSF research budget authority. Through its MPS, NSF provides about two-thirds of the Federal support for ground-based astronomy and nearly half of all Federal support of academic research in the mathematical sciences.
- The Engineering Directorate is proposed to experience the third largest absolute increase, up \$12 million to \$359 million. Of this total, \$66 million is proposed for more than 20 Engineering Research Centers and more than 50 State Industry/University Cooperative Research Centers for which NSF provides funding. Overall, NSF provides about 33 percent of the total support for engineering research at U.S. universities and colleges.
- A 1-percent increase is proposed for NSF's Geosciences Directorate bringing its funding to \$425 million in 1998. This will provide about 50 percent of Federal support for basic research in atmospheric sciences. Through this Directorate, NSF serves as the principal source of Federal funding for university-based fundamental research in the geosciences.
- Expecting to get the largest absolute increase, NSF's Computer and Information Science and Engineering Directorate is to receive \$25 million more for research in 1998, a 10-percent increase. This Directorate provides more than 50 percent of all Federal support for fundamental research in computer science at universities and colleges.
- The Social, Behavioral and Economic Sciences Directorate is scheduled to get \$7 million (up 7 percent) more than its FY 1997 funding level. This Directorate supports 80 percent of federally funded basic research in anthropological archeology and more than one-third in economics. The Directorate also funds multidisciplinary research on topics including human capital, learning and intelligent systems, decision making related to risk, and the use of digital libraries.

**Table 11. R&D budget authority for general science and basic research (251),
Fiscal years 1996-98**

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Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
[In millions of dollars]				
Total.....	2,846	2,962	3,086	4.2
National Science Foundation (NSF).....	2,175	2,257	2,347	4.0
Mathematical and physical sciences.....	655	674	693	2.8
Geosciences.....	410	422	425	0.8
Biological sciences.....	304	313	324	3.4
Engineering.....	323	347	359	3.6
Computer and information science and engineering.....	237	247	272	10.1
U.S. polar research programs.....	59	59	62	5.8
Social, behavioral, and economic sciences.....	107	106	113	6.7
Education and human resources.....	93	90	99	9.9
Budget authority adjustment 1/.....	-13	0	0	NA
Department of Energy.....	671	705	739	4.9
High energy physics.....	469	489	517	5.7
Nuclear physics.....	202	215	222	3.1

1/ Detailed R&D funding data for NSF are expressed only in obligations. Budget authority adjustment converts obligations to budget authority.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C;
budget justification documents; and supplemental data obtained from the agencies' budget offices.

- General science programs at DOE are to increase by 5 percent to \$739 million. Research in high energy physics programs is to increase by 6 percent, or \$28 million. Nuclear physics research funding is expected to rise 3 percent, or \$7 million.

ENERGY

Three agencies provide support for R&D activities in energy (function 270): DOE, which provides 94 percent of the funding in this area; the Tennessee Valley Authority (TVA); and the Nuclear Regulatory Commission (NRC). Total energy R&D budget authority is proposed to be \$2.2 billion in 1998, a 1-percent decrease from the FY 1997 level. Selected energy R&D funding changes are highlighted below.

- DOE's energy budget is proposed to decrease about 3 percent, to \$2.1 billion in 1998. Energy budgets for TVA will increase 73 percent to \$71 million. NRC is slated to be funded 5 percent below its FY 1997 level of \$57 million (table 12). Overall funding for energy-related basic research is proposed to reach \$1.3 billion, an 8-percent gain.
 - Proposed 1998 R&D budget authority for DOE's fossil fuel programs is expected to decrease drastically below the FY 1997 levels due to a proposal to cancel nearly \$300 million in unspent, previously appropriated funds for the Clean Coal Technology Program.
 - R&D on energy conservation is proposed to increase 20 percent, or \$63 million, to \$0.4 billion.
- Programs under this subfunction category include R&D support for building, industrial, and transportation technologies
- A 32-percent increase is proposed for solar and renewable energy research (including solar energy, hydrogen research, geothermal energy, hydro-power, and electric energy)—to \$0.3 billion in 1998.
 - Basic energy sciences, which support both research and scientific facilities, are to receive a \$28 million, or a 5-percent increase to \$593 million. Included in this funding category are materials and chemical sciences, engineering and geosciences, energy biosciences, and equipment and construction projects.
 - DOE's biological and environmental research programs promote the development and application of biotechnology to improve health and protect the environment. Proposed R&D in this area is to increase 9.5 percent to \$349 million. Research on the Human Genome is to account for 24 percent of this total.
 - The computational and technology research account, created in FY 1997 out of components of basic energy science, technology transfer, and magnetic fusion accounts, is to increase 12 percent from \$152 million in FY 1997 to \$170 million in FY 1998.

Table 12. R&D budget authority for energy (270), Fiscal years 1996-98

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Funding category	1996 actual	1997 preliminary 1/	1998 proposed	Percent change 1997-98
[In millions of dollars]				
Total.....	2,521	2,259	2,229	-1.3
Department of Energy.....	2,413	2,161	2,104	-2.6
Fossil energy (271).....	434	270	-20	-107.3
Clean coal technology 2/.....	147	-2	-286	NA
Cooperative R&D.....	6	6	6	3.6
Petroleum, coal, and gas program.....	281	266	261	-2.1
Energy supply (271).....	1,670	1,567	1,736	10.8
Nuclear energy.....	112	95	109	14.1
Magnetic fusion.....	218	209	203	-2.8
Solar and renewables 3/.....	252	235	311	32.2
Energy research analysis.....	3	2	2	-14.3
Environment, safety, and health.....	18	0	0	NA
Small business innovative research.....	67	0	0	NA
Technology transfer.....	14	0	0	NA
Basic energy sciences.....	653	565	593	5.0
Computational and technology res. 4/.....	0	152	170	11.8
University and science education.....	18	0	0	NA
Multiprogram lab support.....	6	0	0	NA
Biological and environmental research.....	309	318	349	9.5
Human genome.....	74	78	85	9.3
All other research.....	235	241	264	9.6
Rescission in P.L. 105-18.....	0	-9	0	NA
Uranium enrichment (271).....	2	0	0	NA
Energy conservation (272).....	306	324	387	19.7
Tennessee Valley Authority (271).....	37	41	71	73.2
Nuclear Regulatory Commission (276).....	71	57	54	-5.3

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

2/ Fiscal year 1998 budget contains a proposal to cancel \$286 million in unspent, previously appropriated funds for Clean Coal Technology.

3/ Includes R&D formerly funded in solar energy, geothermal, electric energy, electric storage, hydropower, and hydrogen accounts.

4/ New account created in FY 1997 out of components of basic energy sciences, technology transfer, and magnetic fusion accounts.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; DOE's budget justification documents; and supplemental data obtained from the agencies' budget offices.